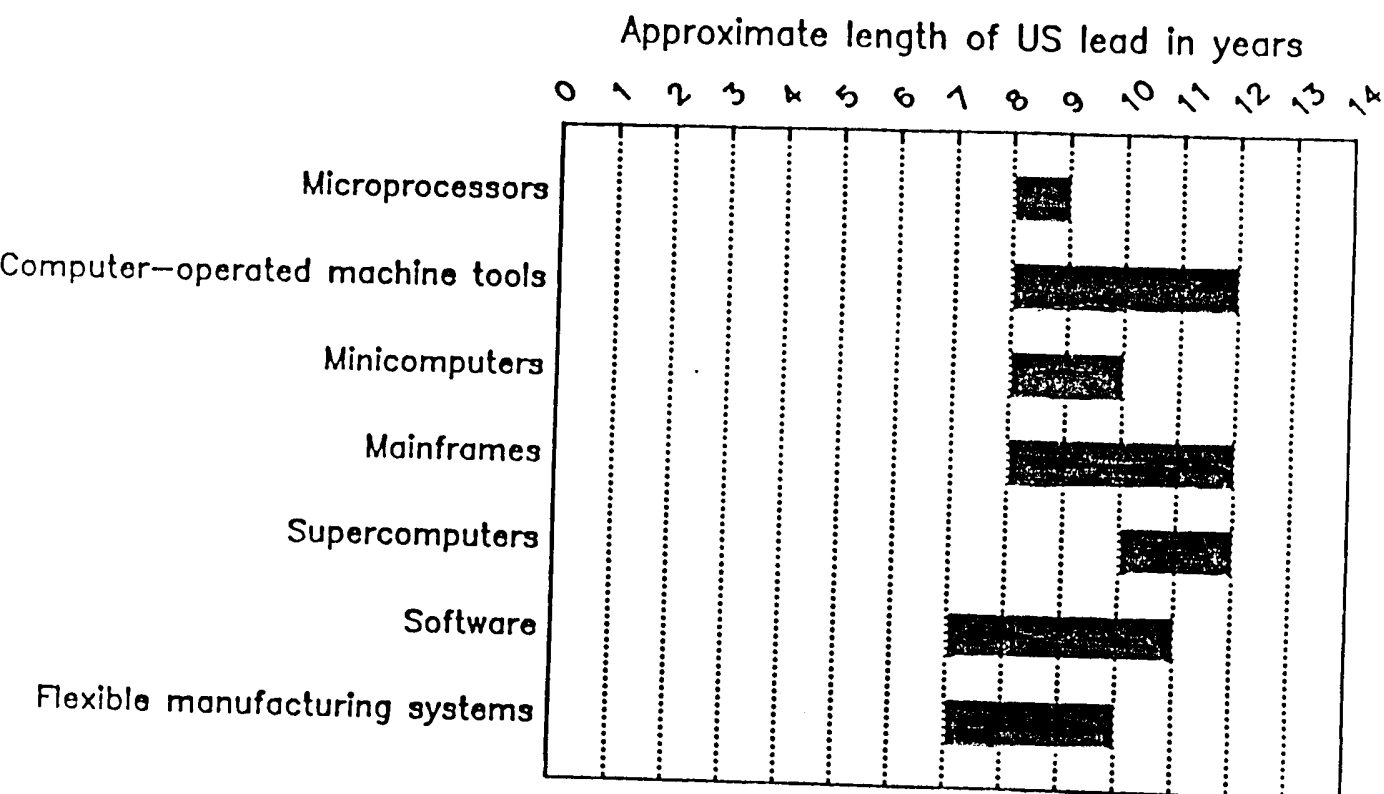


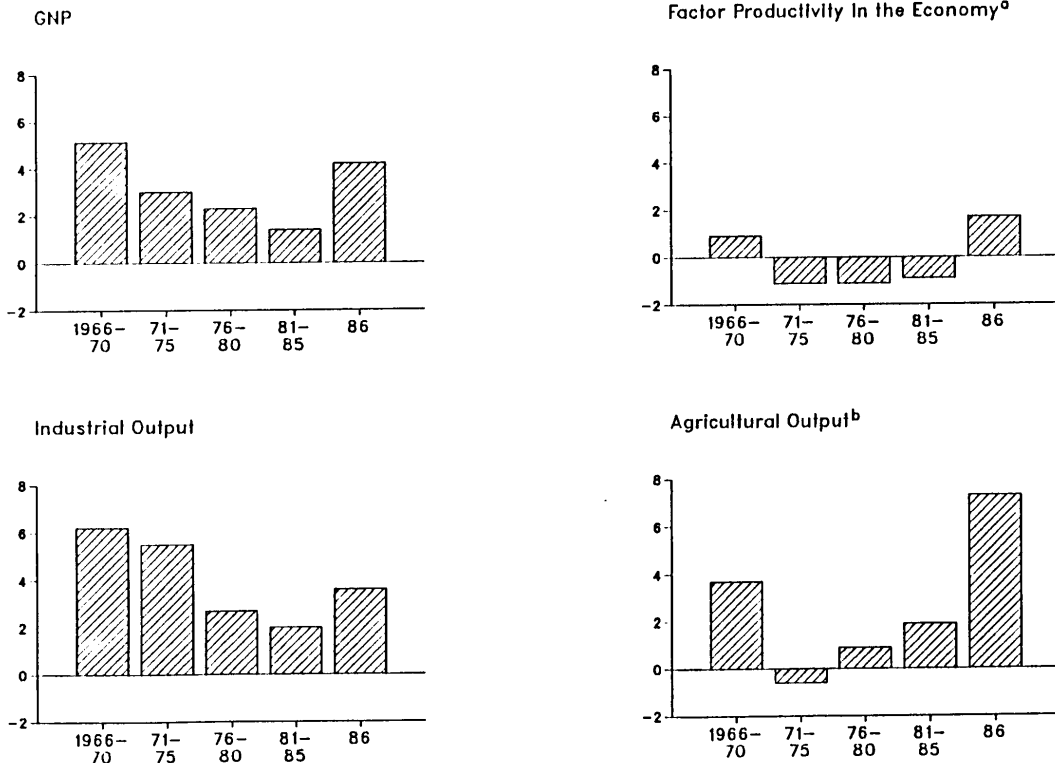
Figure 1

Selected Advanced Manufacturing Technologies: The United States Versus the USSR



US lead is based on projections of length of time required for Soviets to achieve series production of levels of each technology similar to those in US series production today.

Figure 2
USSR: Key Economic Indicators
(average annual percentage growth)



^aFactor productivity measures the difference between the growth of gross national product and the growth of a weighted sum of inputs of land, labor, and capital.

^bGrowth was calculated using net agricultural output, which excludes intra-agricultural use of farm products but does not make an adjustment for purchases by agriculture from other sectors.

Table 1

USSR: Estimated Inventory of Selected Major Weapon Systems
As of 1 January 1987

| <u>Military Service</u> | <u>Weapon System</u> | <u>Number</u> |
|-----------------------------------|--|---------------|
| <u>Ground Forces</u> | Tanks | 55,000 |
| | Armored personnel carriers/ infantry fighting vehicles | 53,000 |
| | Tube artillery | 40,000 |
| | Multiple rocket launchers | 6,500 |
| | Tactical surface-to-air missile launchers | 1,550 |
| | Major surface-to-air missile launchers | 4,550 |
| <u>Navy</u> | Principal surface combatants | 290 |
| | Patrol combatants | 200 |
| | Submarines | 380 |
| | Amphibious warfare ships | 85 |
| | Mine warfare ships | 125 |
| <u>Air and Air Defense Forces</u> | Fighters | 3,950 |
| | Fighter-bombers | 1,900 |
| | Helicopters | 4,000 |
| | Surface-to-air missile launchers (for territorial air defense) | 9,500 |
| <u>Strategic Rocket Forces</u> | ICBM launchers | 1,395 |
| | IRBM launchers | 432 |
| | MRBM launchers | 112 |

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Figure 3
US and Estimated Soviet
Military RDT&E Expenditures, 1965-86

Billion 1985 Dollars

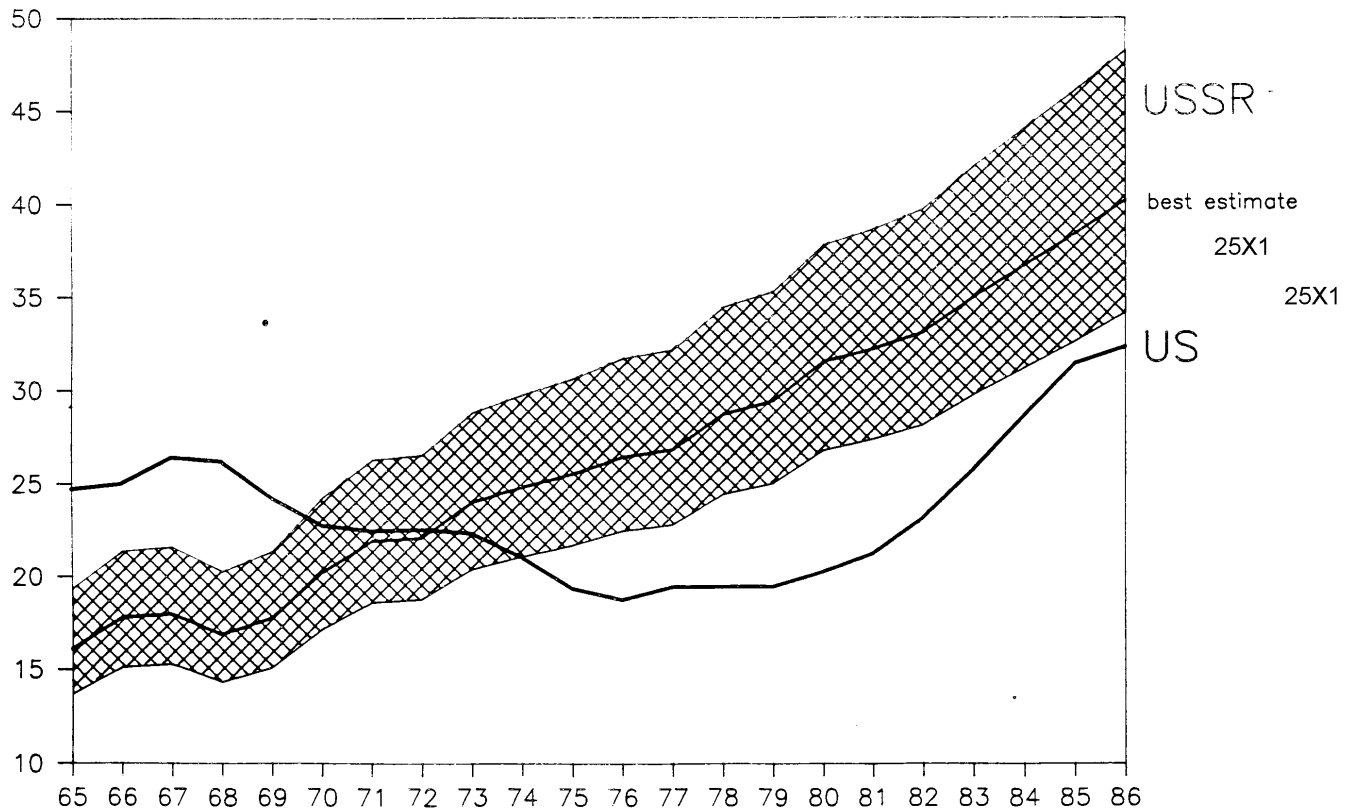
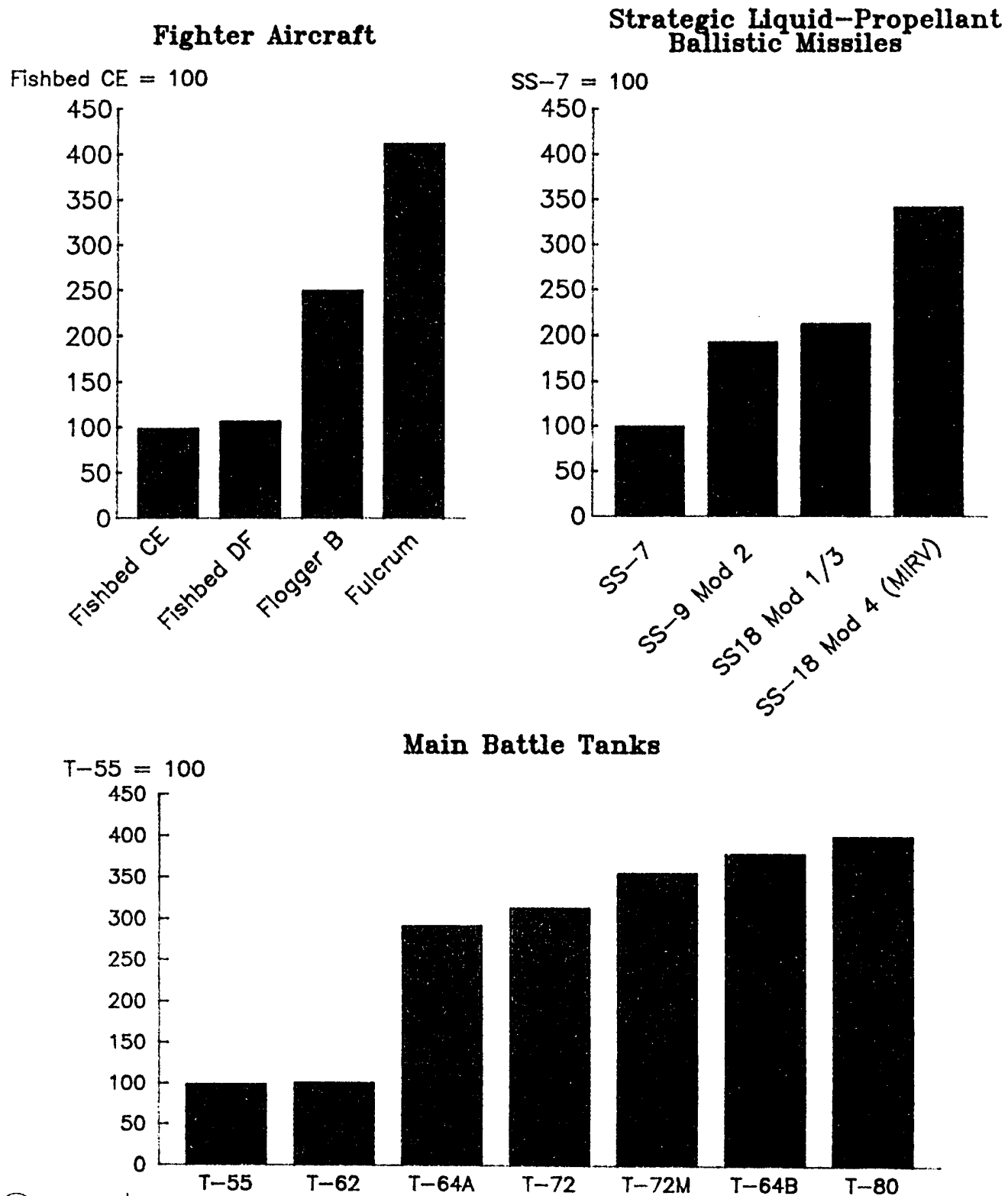


Figure 4

USSR: Growth in Estimated Production Costs of Selected Soviet Weapon Systems



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Table 2

US and USSR: Production by Major Weapon Systems, 1975-85

| | <u>US</u> | <u>USSR</u> |
|--------------------------|-----------|-------------|
| ICBMs/SLBMs | 850 | 3,275 |
| Surface-to-air missiles | 22,100 | 170,000 |
| Strategic bombers | 6 | 365 |
| Fighters/fighter-bombers | 5,650 | 13,000 |
| Helicopters | 2,800 | 9,450 |
| Submarines | 40 | 115 |
| Major surface combatants | 92 | 115 |
| Tanks | 10,050 | 29,375 |
| Artillery | 6,000 | 34,175 |

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Changing Conditions Affecting the Soviet Weapons Industry

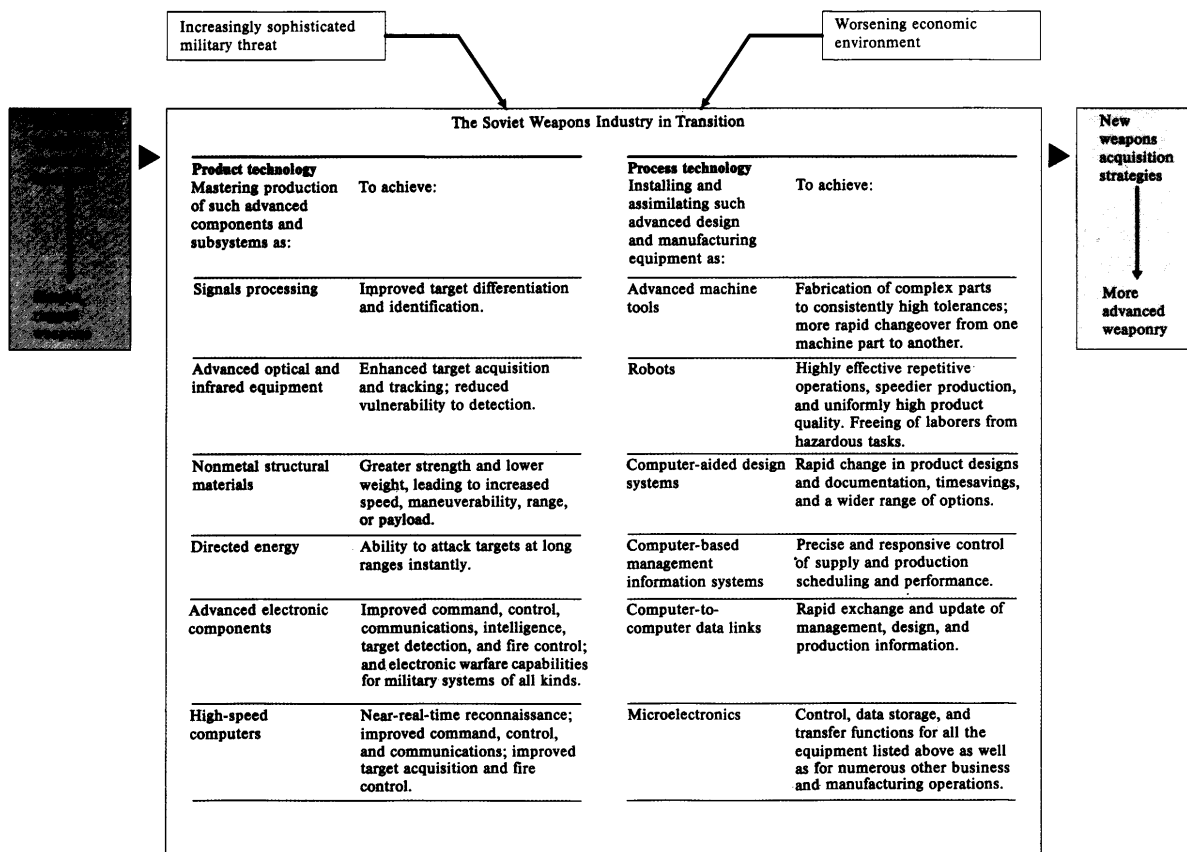


Figure 6

USSR: Military-Civil Competition for Resources

| Resource | Need in Civilian MBMW Sector for Modernization | Availability Outside MBMW Sector | Transferability from Military to Civilian MBMW |
|--|--|--|--|
| Materials | | | |
| Basic/Raw: | | | |
| Energy | Medium | High | High |
| Intermediate: | | | |
| Chemical feed stock | High | Medium | Medium-High |
| Engineering fibers | Low-Medium | Low | Medium |
| Semiconductor silicon | High | Low | High |
| Specialty steel | Medium-High | High | Medium-High |
| Aluminum | Medium-High | High | High |
| Titanium | Low | Medium | Medium |
| Tungsten | High | Medium | High |
| Construction materials | Medium | High | High |
| Intermediate Products | | | |
| Conventional: | | | |
| Precision electric motors | High | Low | Medium-High |
| Small diesel engines | High | Low | Medium |
| Advanced: | | | |
| Applications, networking, CAD/CAM software | High | Low | Medium-High |
| Engineering plastics | High | Low | High |
| Microprocessors | High | Low | High |
| Composites | Medium | Low | Medium |
| Mainframe and minicomputers | High | Low | High |
| Microelectronic devices | High | Low | High |
| Digital Communications | Medium-High | Low | High |
| Manpower: | | | |
| Skilled: | | | |
| Computer | | | |
| programmers | High | Low-Medium | High |
| repairmen | High | Low | High |
| Electronics, communications, instrumentation tech- nicians | High | Low | High |
| Software engineers | High | Low | High |
| Systems engineers | High | Low | High |
| Machinists | Medium | Low-Medium | High |
| Industrial engineers | High | Low-Medium | High |
| Unskilled: | | | |
| Laborers | Low | Low-Medium | High |

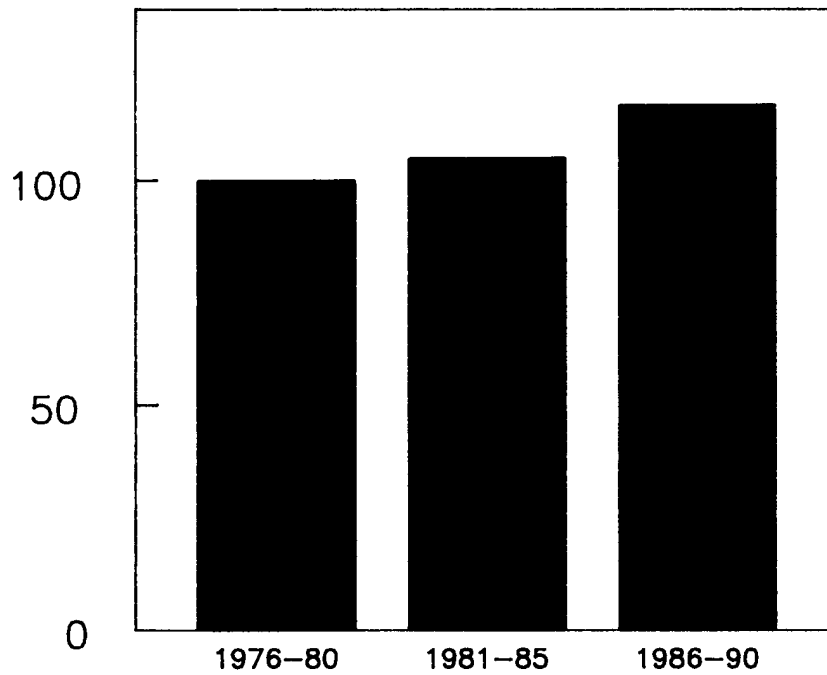
Figure 7

Estimated Soviet Defense and Procurement Spending, 1976-1990

(Index: 1976-80 = 100)

These charts calculated from data in constant 1982 rubles.

Total Defense



Total Procurement

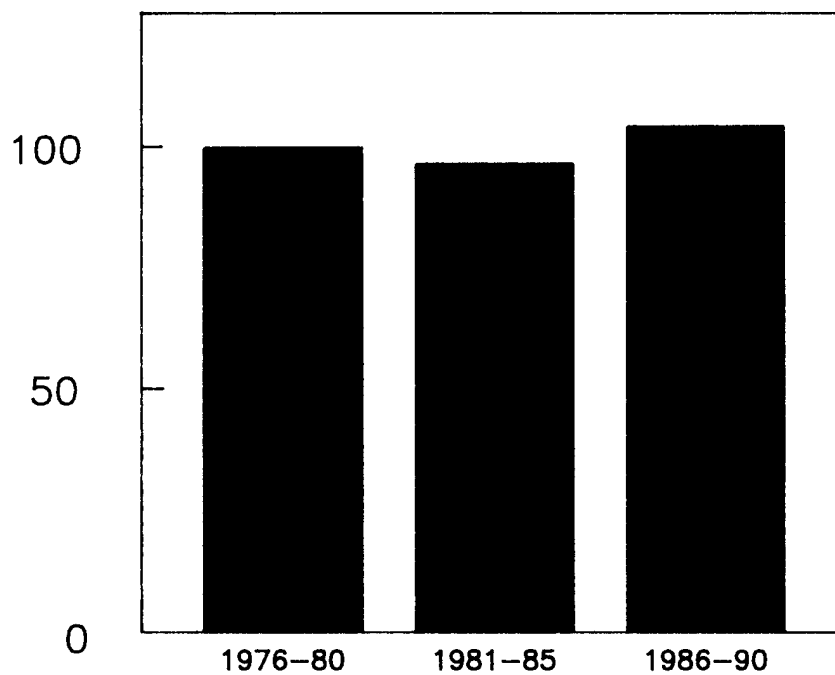


Table 3

US and USSR: Major Economic Indicators, 1985

| | <u>US</u> | <u>USSR</u> |
|--|-----------|-------------|
| GNP (billion US \$) | \$3,990 | \$2,160 |
| Population (millions) | 238.6 | 278.9 |
| GNP per capita | \$16,720 | \$7,740 |
| Consumption per capita | \$11,660 | \$3,690 |
| Grain output ¹ | 1,450 | 680 |
| Meat production ¹ | 108 | 61 |
| Oil production ² | 8,933 | 11,350 |
| Natural gas production ³ | 17,220 | 20,721 |
| Coal production ⁴ | 803.9 | 648.5 |
| Nuclear power capacity ⁵ | 83.6 | 28.3 |
| Crude steel production ⁴ | 80.1 | 155.0 |
| Cement production ⁴ | 72.6 | 131.0 |
| Textile production ⁶ | 13.3 | 10.3 |
| Footwear production ⁷ | 300 | 787 |
| Final machinery output (billion US \$) | \$412 | \$317 |
| Construction (billion US \$) | \$408 | \$334 |
| Total freight turnover ⁸ | 3442 | 5774 |

1 Kilograms per capita

2 Thousand barrels per day

3 Billion cubic feet

4 Million metric tons

5 Thousand megawatts. US figure is on a net basis; Soviet data is gross capacity.

6 Billion square meters

7 Million pairs

8 Billion metric ton-kilometers. Includes railroad, motor vehicle, inland water, and air freight as well as petroleum pipelines.